Natural Resource Damage Assessment for the Deepwater BP Oil Spill

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NOAA Office of Response and Restoration
Marine Fisheries Advisory Committee Meeting
October 19, 2100

What We Will Discuss

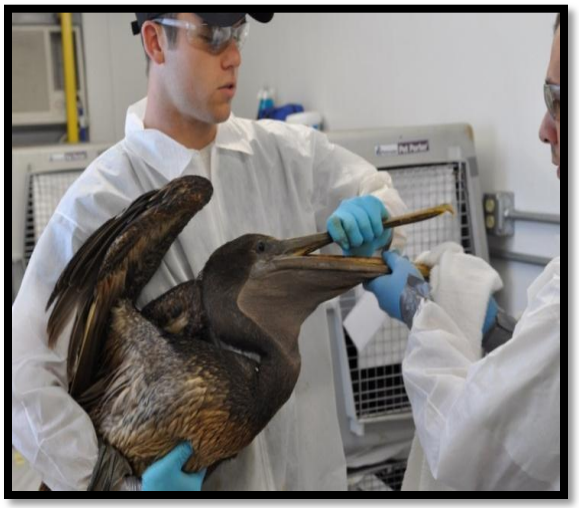
Review of NRDA Goals
DWH NRDA Process and Status Update
Q&A

Goal of Natural Resource Damage Assessment and Restoration

- Compensate the Public for injuries to natural resources and for lost human uses

In Summary, Three Things…

- **NRDA is Restoration-Focused**
  - Restoration is considered early and throughout the NRD process
- **NRDA is a Cooperative Process**
  - Getting to restoration requires a common vision & coordination with:
    - Co-Trustees and the public
    - Moves more quickly if Responsible Party shares the same vision and works cooperatively with the Trustees
- **NRDA is a Legal Process**
  - Trustees are required to demonstrate causality between the release & resource injury/lost use
  - The polluter pays for assessment and restoration



DWH Trustee Council Membership

- **Federal Trustees:**
  - U.S. DOC – NOAA
  - U.S. DOI – FWS, NPS, BLM, BIA
  - U.S. DOD –Navy

- **State Trustees:**
  - Alabama
  - Florida
  - Louisiana
  - Mississippi
  - Texas

- **Trustee Council:**
  - Goal: Work cooperatively to determine the magnitude and extent of injury to natural resources in the GOM from the DWH spill and fully restore those injured resources

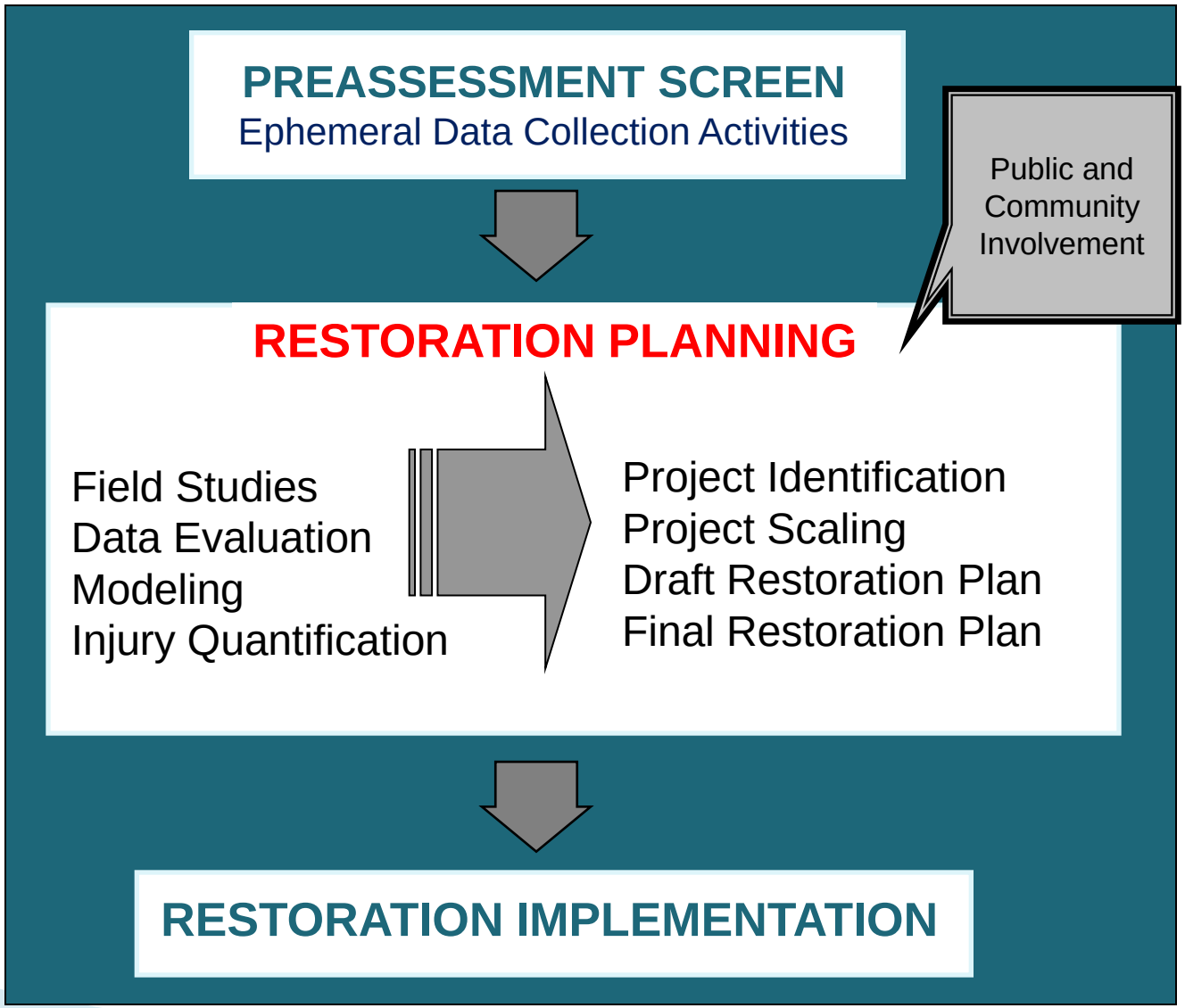
Oil Pollution Act NRDA Framework

Release

Pathway

Exposure

Injury



Upcoming and Ongoing Activities…

- Notice of Intent to Conduct Restoration Planning, published in Fed. Reg. 10/1/10
- NRDA public meetings: five states in October
- Programmatic EIS
- Assessment activities continuing

Current Assessment Activities for DWH

- Technical Working Groups (TWGs) composed of State and Federal natural resource trustees are working with the RP's consultant to implement pre-/post-impact field studies for multiple resources:

  - Water Column – fate and transport
  - Fisheries and Plankton
  - Submerged Aquatic Vegetation
  - Subtidal Habitats
  - Shallow and Deepwater Corals
  - Shoreline Habitats: Beaches, wetlands, mudflats
  - Birds
  - Marine Mammals and Turtles
  - Terrestrial Wildlife
  - Human Use: Fishing, hunting, and beach recreational closures
  - Includes water/sediment/tissue sampling and observations from planes, ships and shore
  - Includes potential impacts from the response

NRDA Assessment Activities

ASSESSING THE IMPACTS OF OIL: FIRST STEPS

How and where did the oil move? *Dispersants used during response operations break down oil into smaller particles that mix into the water. Oil that is not dispersed may be caught in currents and may settle onto the ocean floor. Spill responders attempt to burn and remove oil that reaches the surface, but the oil they cannot reach is churned by wind and waves to form the brown, foamy "mousse" that reaches our shores.*

Who is assessing the impacts of oil? *Efforts to understand the impacts of oil on ocean life, coastal habitats, and human use began shortly after the spill was discovered. Through the Natural Resource Damage Assessment process, the natural resource agencies are examining oil in the open water, near shore, and on land to assess the scope and scale of the damage and determine how much work is necessary to restore the Gulf of Mexico.*

TOOLS AND METHODS

GROUND SURVEYS

SMALL BOAT OPERATIONS

WATER QUALITY TESTING

AERIAL SURVEYS

UNDERWATER SURVEYS

OIL IN THE OPEN WATER

Oil in the open water may affect the health of microscopic plants and animals that form the basis of the oceanic food web. The eggs and larvae of shrimp, fish, and other commercially and recreationally important species are at risk, as are adult fish, sea turtles, marine mammals, and ocean-going birds. Far beneath the surface, corals and other deepwater communities also may be affected.

WATER COLUMN AND SEDIMENTS

- *Water quality surveys*
- *Transect surveys to detect submerged oil*
- *Oil plume modeling*
- *Sediment sampling*

TURTLES AND MARINE MAMMALS

- *Aerial surveys*
- *Tissue sampling*
- *Acoustic monitoring*
- *Satellite tagging*

OIL IN NEARSHORE HABITATS

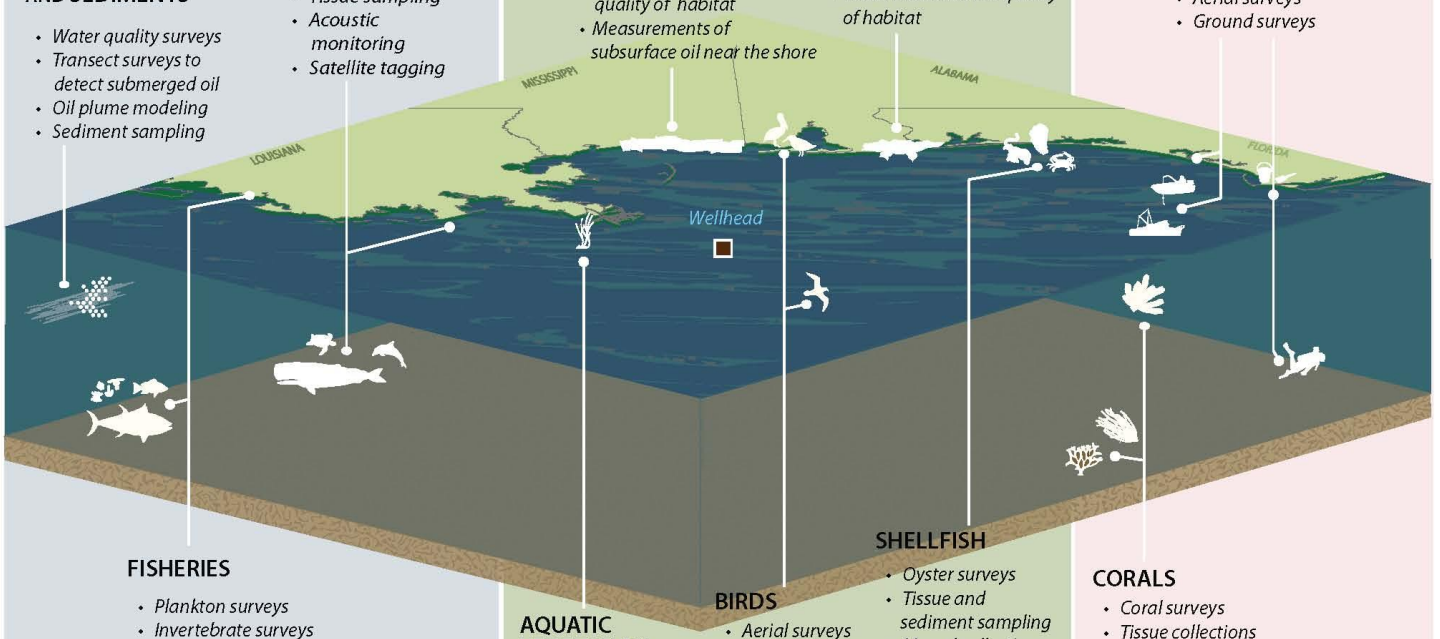
Sensitive nearshore communities such as oyster beds and shallow-water corals may lie directly in the path of underwater oil and surface mousse riding the waves to shore. When the oil does hit land, it can severely impact coastal habitats including marshes, mudflats, mangrove stands, and sandy beaches. Organisms that use these habitats, such as birds, crabs, turtles, crocodiles and other aquatic and terrestrial species also are at risk.

SHORELINES

- *Aerial surveys*
- *Ground surveys*
- *Observations of the quality of habitat*
- *Measurements of subsurface oil near the shore*

TERRESTRIAL AND AQUATIC SPECIES

- *Ground surveys*
- *Observations of the quality of habitat*



FISHERIES

- *Plankton surveys*
- *Invertebrate surveys*
- *Adult fish surveys*
- *Larval fish surveys*

AQUATIC VEGETATION

- *Aerial surveys*
- *Field surveys in large beds of aquatic vegetation*

BIRDS

- *Aerial surveys*
- *Ground surveys*
- *Nearshore boat surveys*
- *Offshore boat surveys*
- *Radio telemetry*

SHELLFISH

- *Oyster surveys*
- *Tissue and sediment sampling*
- *Mussel collection*
- *Shrimp collection*

OIL AND HUMAN USE

Humans, like wildlife, also rely on the ocean and coasts. From fishing to water sports and sunbathing to birdwatching, humans enjoy and rely on Gulf Coast waters and nearshore environments in many ways.

HUMAN USE

- *Aerial surveys*
- *Ground surveys*

CORALS

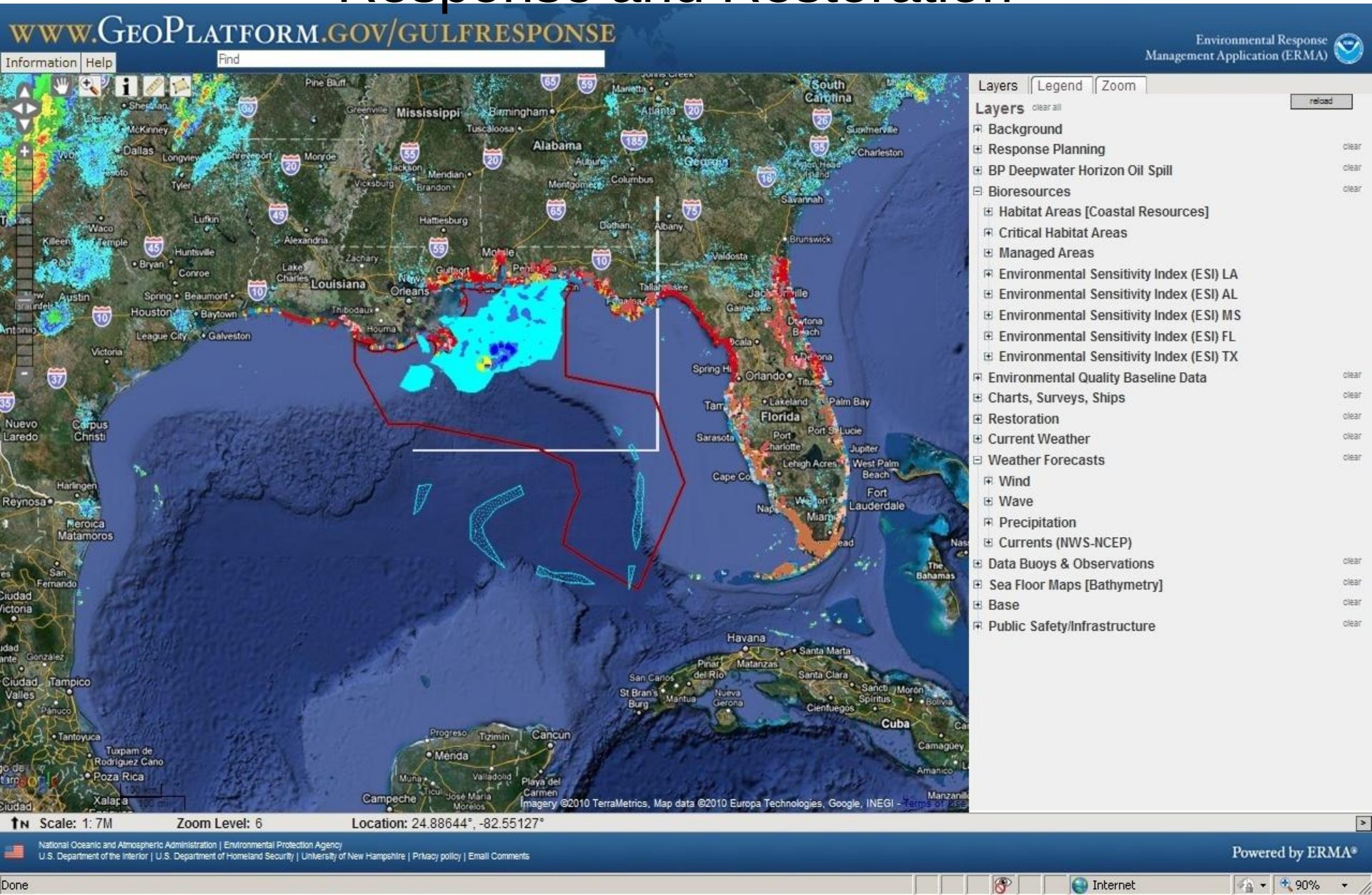
- *Coral surveys*
- *Tissue collections*
- *Contaminant surveys*

Sampling Snapshot (early Oct.):

- Over70 offshore research cruises
- 23,500 NRDA environmental samples:
  - 15,763 water
  - 2,573 sediment, and
  - 2,149 tissue samples.
- ~2,000 linear miles of shoreline surveyed
- Oil documented on more than 950 miles of shoreline
- Live oiled wildlife captured: >1,900 birds and 450 sea turtles.
- Dead visibly oiled wildlife collected: 1,850 birds, 17 sea turtles; 5 marine mammals.

Questions and Additional Info?

GeoPlatform.Gov – Monitoring Oil Spill Response and Restoration



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